



**ALLSEEN
ALLIANCE**

Overview for oneM2M

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What is the AllSeen Alliance?

- A nonprofit consortium dedicated to enabling the widespread adoption of products, systems and services that support the Internet of Things through an open environment, vibrant ecosystem and thriving technical community.
- Hosts and advances an industry-supported software and services framework based on the AllJoyn collaborative open source project.
- This open source software enables manufacturers and developers to create interoperable products that discover and securely interact directly with other things, systems and services regardless of brand.

Open-source framework managed by AllSeen Alliance

A collaborative project of the Linux Foundation

◦ Premier Members (11):

- Electrolux
- Haier
- LG
- Microsoft
- Panasonic
- Qualcomm Connected Experiences, Inc.
- Sharp
- Silicon Image
- Sony
- Technicolor
- TP Link

◦ Sponsored Members (11):

- Beijing University of Posts & Telecommunications
- Bonn-Rhein-Sieg University
- BRNO University of Technology
- CableLabs
- Fundacio Technocampus Mataro-Maresme
- OpenHAB
- Politecnico di Milano
- Sam Lanning, Justin King-Lacroix, Yonghua Li
- Telecommunications Industry Assoc. (TIA)


◦ Community Members (59):

- 2lemetry
- Affinegy
- AT&T Digital Life
- Audio Partnership
- Beechwoods Software
- Beijing Winner Micro Electronics
- Bosch
- CA Engineering
- Canary
- Cisco
- Cloud of Things
- ControlBEAM
- D-Link
- doubleTwist
- EXO U
- Fon
- Fortune Techgroup
- FreeWings Technologies
- GEO Semiconductor
- Gowex
- Grid2Home
- Guangdong Pisen Electronics
- Harman
- HTC
- iControl Networks
- Imagination Technologies
- Innopia Technologies
- ISI Technologies
- Kii
- Legrand Group
- LeTV
- LightFreq
- LIFX
- Lite-On
- Local Motors
- M2 Communication
- MachineShop
- Moxtrema
- Musaica
- Muzzley
- Octoblu
- Patavina Technologies
- Ping Identity
- Razer
- Red Bend Software
- Revolv
- Sears Brand Management Corporation
- Shaspa
- Sproutling
- Symantec
- Tellient
- The Sprosty Network
- ThroughTek
- Tuxera
- Two Bulls
- Vedams
- Vestel Group
- Weaved
- Wilocity


Alliance and Objectives

Supporting the Internet of Things through an open environment, vibrant ecosystem and thriving technical


Alliance



Open Source Community

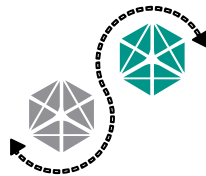


Industry leaders



Tech innovators

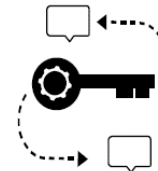
Vibrant Ecosystem



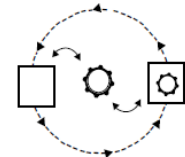
Evolve the Project



Evangelize



Contribute & Use



To learn more visit allseenalliance.org

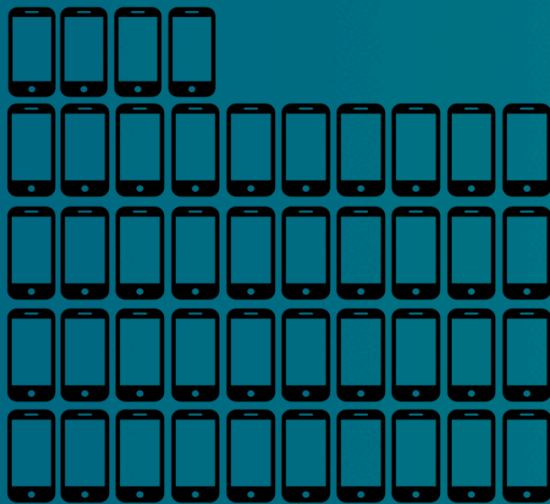
To participate contact Joe Speed <jspeed@linuxfoundation.org>

Mobile – The largest technology platform

~3.3 billion unique subscribers

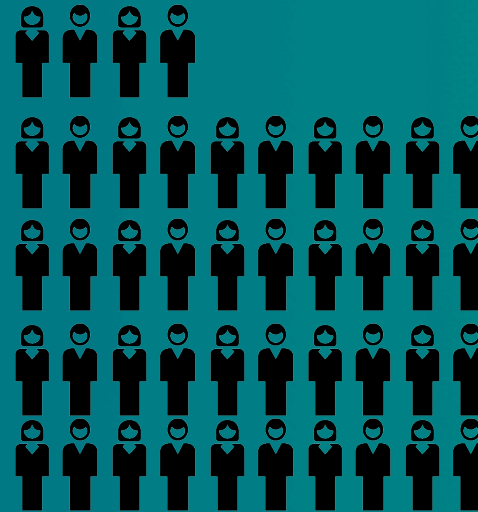
6.8 B

connections



7.2 B

people



And that platform is about to be

Scope of change and economic opportunity reminiscent of the Industrial

Revolution*

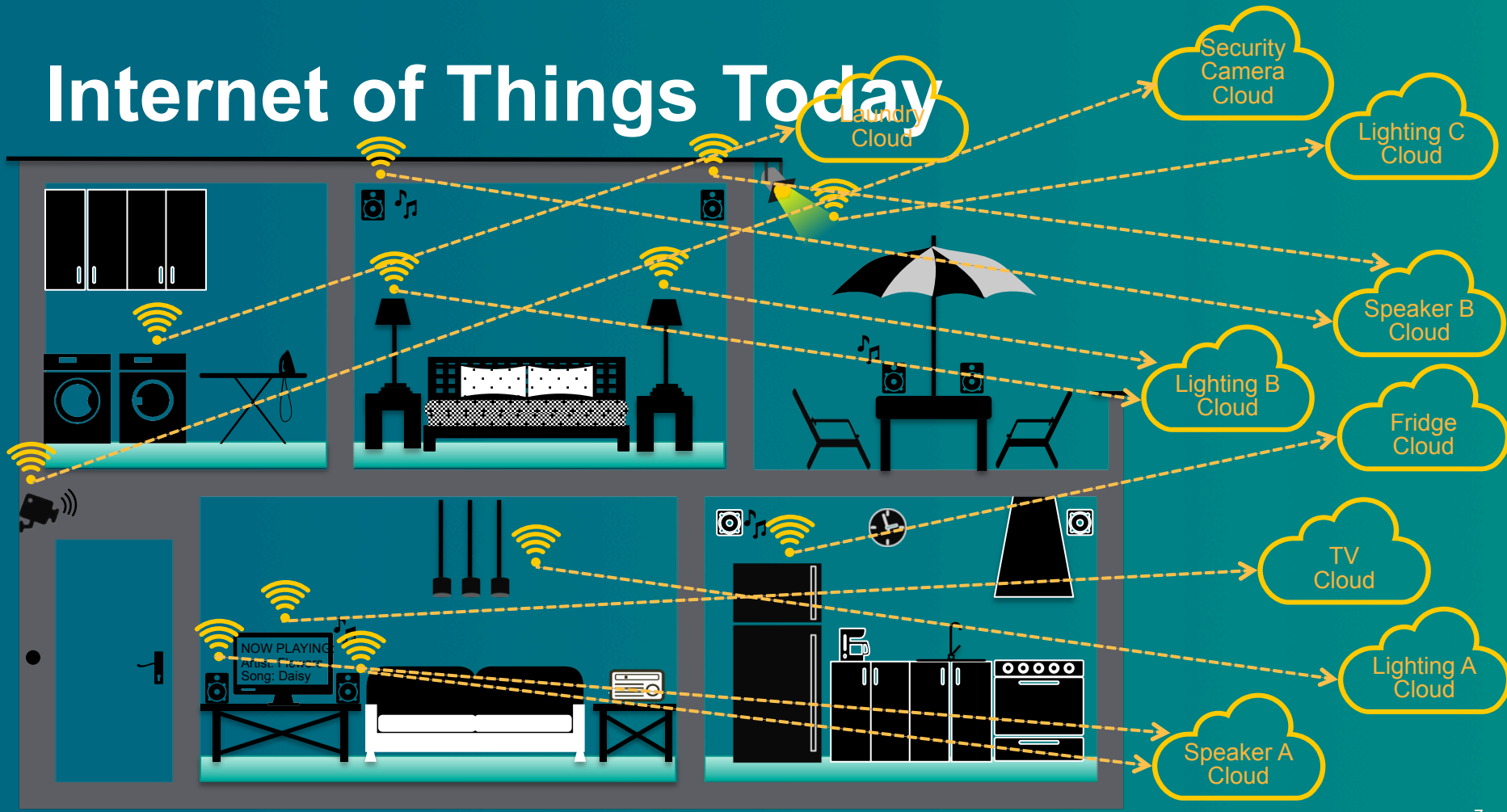


- By 2020, 25 billion things will be connected**
 - Via Wi-Fi, wire line, cellular, and proximal networks
 - Benefiting billions of people worldwide
- Transforming:
 - Industry
 - Infrastructure
 - Media
 - Education
 - Work
 - Recreation
 - Family
 - Daily life

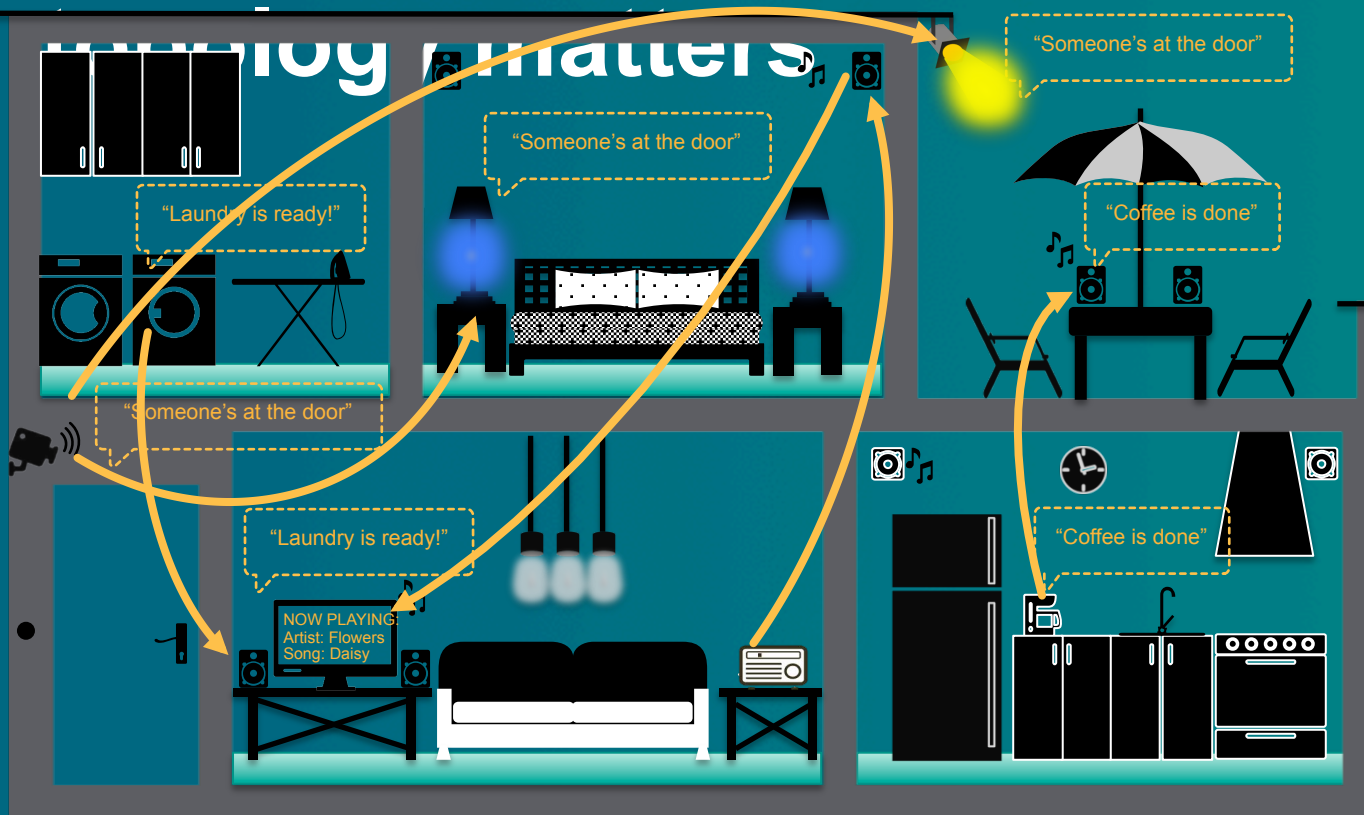
* Source: Forbes "How the Internet of Things is more like the industrial revolution than the digital revolution: <http://www.forbes.com/sites/oreillymedia/2014/02/10/more-1876-than-1995/>

** Source: GSMA, Machina Research. http://www.gsma.com/connectedliving/wp-content/uploads/2013/03/JimMorrish_GSMA-Connected-Life-20130624-v4.pdf

Internet of Things Today



Why the AllJoyn proximal network



Direct communication with the AllJoyn framework is fast, efficient, and secure.

No need to go out to the cloud to talk to the device right next to you!

Exposing mobile's APIs enabled new experiences - that no one had thought of



AllJoyn framework will expose the capabilities of the connected devices in your home in the same way.

A single platform allowing products to expose their capabilities



Ubiquitous connectivity promises to make devices “smart”

But ONLY if they speak the same language

hello world!



Computing devices

당신은 내 말 들려?



Consumer goods and appliances

Tem alguém aí?



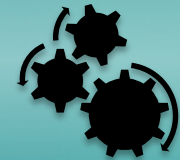
Home

⋈⋈●●◆□□⋈⋈



Auto

100010101011



Industrial

Devices that can't connect across brands, categories, and operating systems will be left out

AllJoyn framework lets smart things work together

Connect, manage and interoperate across brands, categories, bearers, and OS

hello world!

AllJoyn framework



Computing devices

당신은네가말! 들려?

AllJoyn framework



Consumer goods and appliances

Tem bəggwóh aí?

AllJoyn framework



Home

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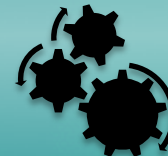
AllJoyn framework



Auto

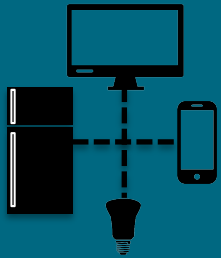
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AllJoyn framework



Industrial

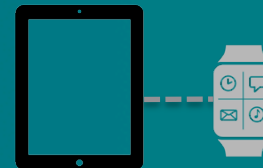
The problems that AllJoyn solves...in an open interoperable way



DISCOVER
nearby friendly devices



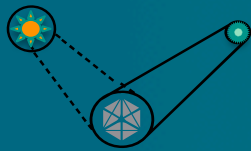
IDENTIFY
services running
on those devices



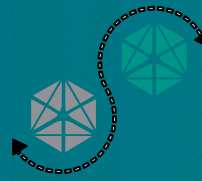
ADAPT
to devices coming
and going



MANAGE
diverse
transports



INTEROPERATE
across different OSes

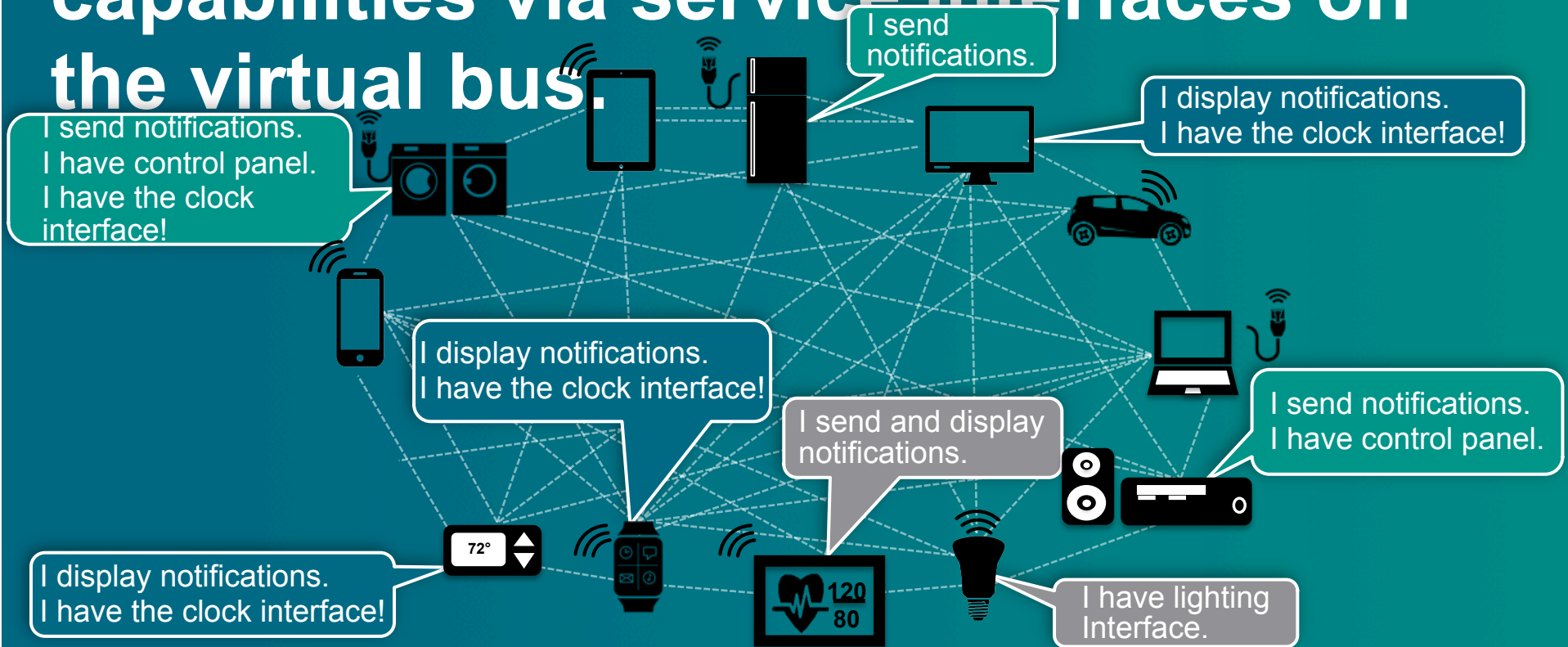


EXCHANGE
information and services



SECURE
against nearby bad actors

AllJoyn enabled devices describe their capabilities via service interfaces on the virtual bus.



AllJoyn is open source just like Linux

- **Vibrant, collaborative, transparent** open-source community
 - “Code First” **adopting best open standards**
 - **20 open standards used**, community is anti-proprietary
 - **Open source since inception** C, C++, ObjectiveC, Java, JavaScript, Python
 - **Cross-platform, cross-OS**: Linux, Windows, iOS, Android, OSX, OpenWRT
- **Download & use.** No membership required, anyone can contribute
 - Source Code, SDKs are open & ready to use allseenalliance.org/source-code
 - Technical Steering Committee is open wiki.allseenalliance.org/tsc
 - All Working Groups are open wiki.allseenalliance.org/start
 - Bug & Feature tracking is open wiki.allseenalliance.org/develop/reporting_bugs

Secure, Private, Safe

- Obsessive focus on Security, Privacy, Authentication, Authorization
- Proximal has security & privacy advantages. Mesh or spoke & hub
- Access is policy driven, granular down to interface i.e. discrete functions.
- Application to application security more granular than device to device
- Framework includes SPKI, PKI, X.509, Elliptical Curve Crypto, et al.
- Security 2.0 in development enables a new degree of end-user control
- Security 2.0 work led by Symantec, Microsoft, Technicolor, QCE
wiki.allseenalliance.org/core/security_enhancements

In Products

- Products are already shipping allseenalliance.org/showcase
- Members are planning & releasing products
- Products launched at IFA, CES for Consumer, Home, Commercial, Cloud



25 September 2014

AllSeen Alliance

A screenshot of the AllSeen Alliance website. The top navigation bar includes 'LINUX FOUNDATION COLLABORATIVE PROJECTS', 'My account >', 'Log out >', and social media icons. The main navigation menu has 'ABOUT', 'DEVELOPERS', 'DOWNLOAD', 'SHOWCASE', 'CERTIFICATION', and 'NEWS & EVENTS'. The page title is 'SHOWCASE OF PRODUCTS USING THE ALLJOYN SOFTWARE FRAMEWORK'. Below the title are 'View', 'Edit', and 'Revisions' buttons. The main content area contains a paragraph of text and a list of product categories with their respective items.

Home > Showcase of Products using AllJoyn

SHOWCASE OF PRODUCTS USING THE ALLJOYN SOFTWARE FRAMEWORK

View Edit Revisions

Many AllSeen Alliance members and other companies are integrating the AllJoyn software framework into their products to highlight how smart things can discover, expose their capabilities and work together. The following showcases products that are publicly announced. More will be added soon. If you have a product that uses the AllJoyn software framework, please email info@allseenalliance.org! This opportunity is open to both members as well as non-members.

- **Automotive**
 - Local Motors Rally Fighter
 - planned: Local Motors Strati 3D printed car
- **Smart Building**
 - Birdi: Smart Air Monitor
 - Shaspa Iamus IoT Cloudlet
- **Lighting**
 - LIFX wifi, multi-color, energy efficient LED light bulbs
- **TVs**
 - John-Lewis JL9000 LED 3D HDTVs
 - LG SMART+ WebOS 2D and 3D TVs
 - LG UltraHD 4K TVs
 - LG OLED TVs
 - LG 105" Curved UltraHD TV
 - LG 55" Curved OLED CINEMA 3D SMART TV
 - LG UltraHD 8K TV
- **Sound Systems**
 - Gramofon by Fon
 - Lenco PLAYLINK
 - Monster SoundStage
 - Musaic Wireless HiFi System
 - Panasonic SH-ALLIC Network Audio Connector
 - Panasonic SC-ALL3 Wireless Speaker System
 - Panasonic SC-ALLB Wireless Speaker System
 - Qualcomm AllPlay
- **Mobile Apps**
 - AirSputnik by MobilityLabs
 - AllPlay Jukebox by eMbienc
 - AllPlay Radio by eMbienc
 - AUPEO!
 - Doubletwist
 - FXO 11 Collaborative Workspace

Certification & Compliance

Phase 1 – Self Certification

The AllSeen Alliance launched a certification and compliance program to ensure products discover and securely work with one another

- Self-certification is free
- No need to be a member
- Detailed process outlined at allseenalliance.org/certification
- Program and Developer User Guides also available

25 September 2014

The screenshot shows the AllSeen Alliance website. At the top, there is a navigation bar with the Linux Foundation logo and 'COLLABORATIVE PROJECTS'. Below this are links for 'Register >' and 'Log In >'. A search bar is on the right. The main navigation menu includes 'ABOUT', 'DEVELOPERS', 'DOWNLOAD', 'SHOWCASE', 'CERTIFICATION', and 'NEWS & EVENTS'. The 'CERTIFICATION' menu item is highlighted. Below the navigation, the page title is 'Home > AllSeen Alliance Certification'. A sidebar on the left lists 'CERTIFICATION', 'How To Validate Your Product', and 'FAQ'. The main content area features the heading 'SMART PRODUCTS ARE SMART BUSINESS.' followed by a paragraph about the IoT ecosystem. A 'DESIGNED FOR ALLSEEN' badge is visible. Below this, a paragraph states that certification will be supported by a third-party program. Three key benefits are listed: Confidence, Simplicity, and Value, each with a brief description. A 'Validate your product now >>' button is at the bottom.

LINUX FOUNDATION COLLABORATIVE PROJECTS

Register > Log In >

ALLSEEN ALLIANCE

ABOUT ▾ DEVELOPERS ▾ DOWNLOAD SHOWCASE CERTIFICATION ▾ NEWS & EVENTS ▾

Home > AllSeen Alliance Certification

CERTIFICATION >

How To Validate Your Product >

FAQ >

SMART PRODUCTS ARE SMART BUSINESS.

The Internet of Things can't be built by a single brand or company. That's why the AllSeen Alliance is developing the first truly collaborative, open ecosystem for interoperable products and services that will communicate, engage and delight users in new, exciting and useful ways. By participating in the Designed for AllSeen self-certification process, you're helping to make smart products truly interoperable, and you're joining a connected network of companies, products, and applications.

In the future, AllSeen Alliance certification will be supported by a third-party certification program, but you don't have to wait. Designed for AllSeen, our initial self-certification program, provides many benefits.

Confidence.
Validation ensures seamless, out-of-the-box interoperability and means your product will be part of an interconnected ecosystem.

Simplicity.
The easy, five-step process allows you to self-certify products now, so you can begin participating in our open ecosystem right away.

Branding.
By building smarter products that connect automatically with all the products in the AllSeen ecosystem, you can boost your brand and increase customer satisfaction.

Value.
With a truly streamlined and completely free validation process, you can significantly lower development time and costs.

[Validate your product now >>](#)

AllJoyn Software Framework: High-level architecture

A comprehensive software framework lets devices and applications communicate

AllJoyn App Layer

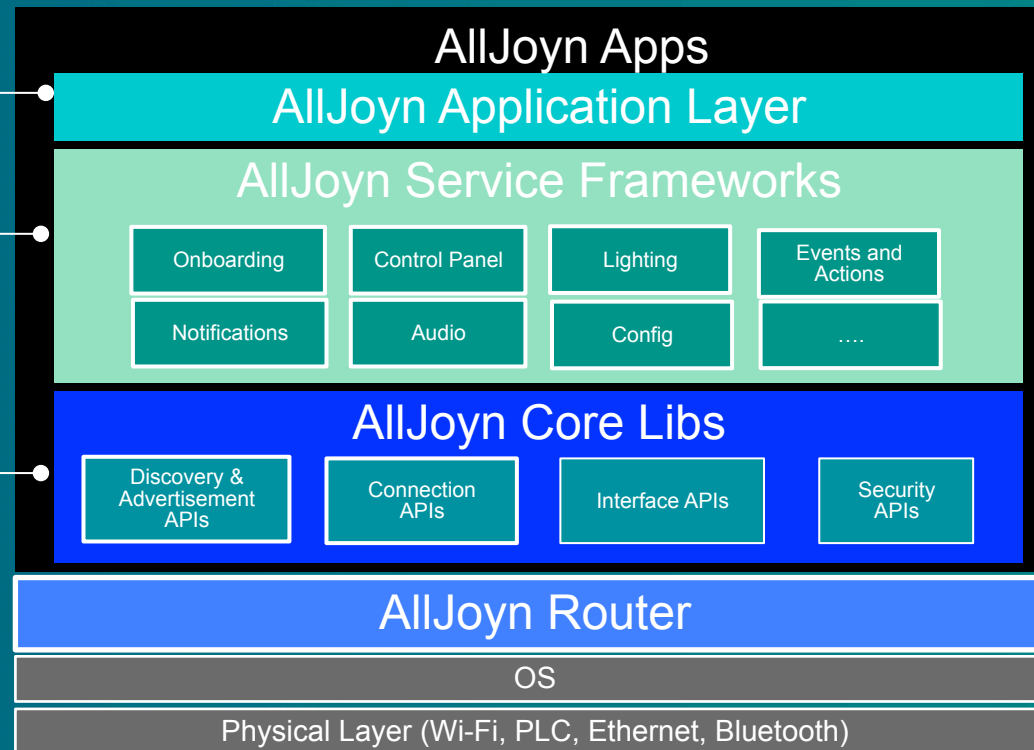
- Defines the User experience

AllJoyn Service Frameworks

- Interoperable, cross-platform modules for common IoT functionality
- Defines common interfaces between devices

AllJoyn Core Libs

- Provides ability to find and connect to devices to do interesting things.
- Core libraries interact with the AllJoyn Router
- Provides access control and encryption

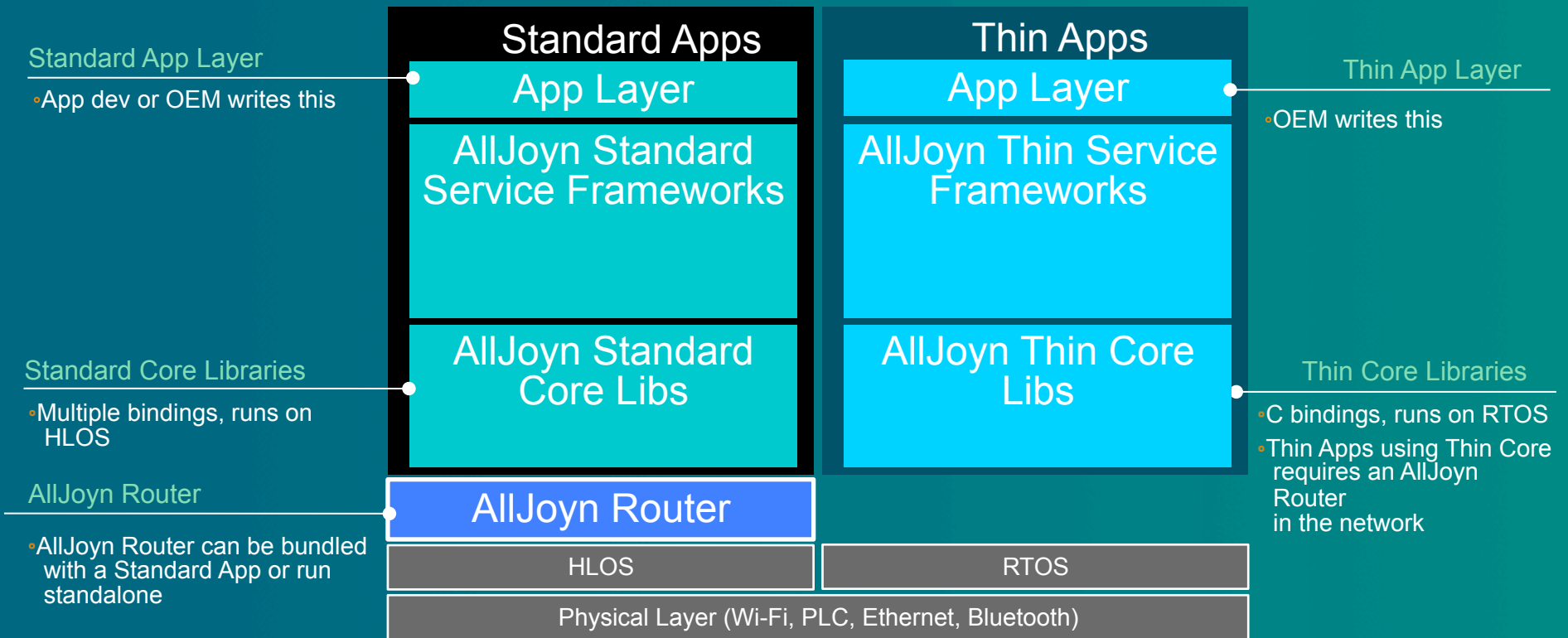


AllJoyn Router

- Manages communications between devices and apps
- Dynamic network management

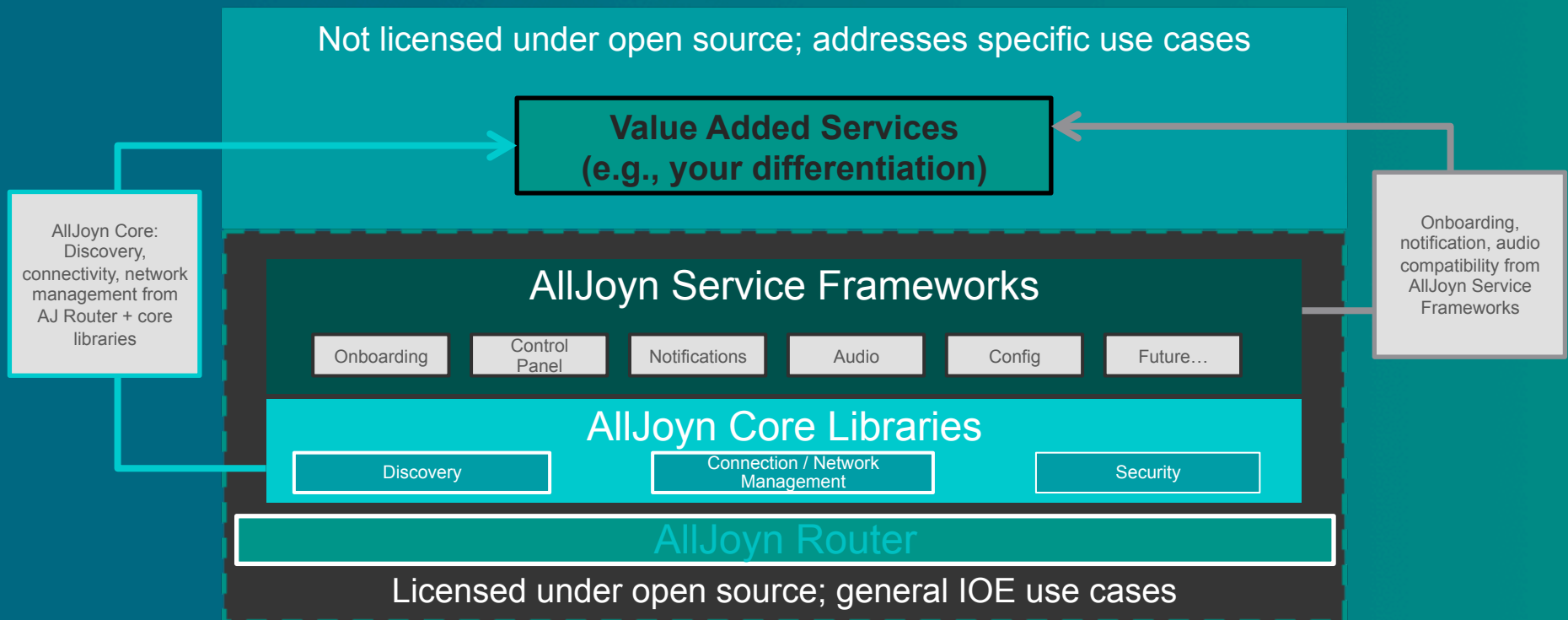
The AllJoyn software framework is a collaborative open source project of the AllSeen Alliance

Two Versions of the AllJoyn Framework To Choose

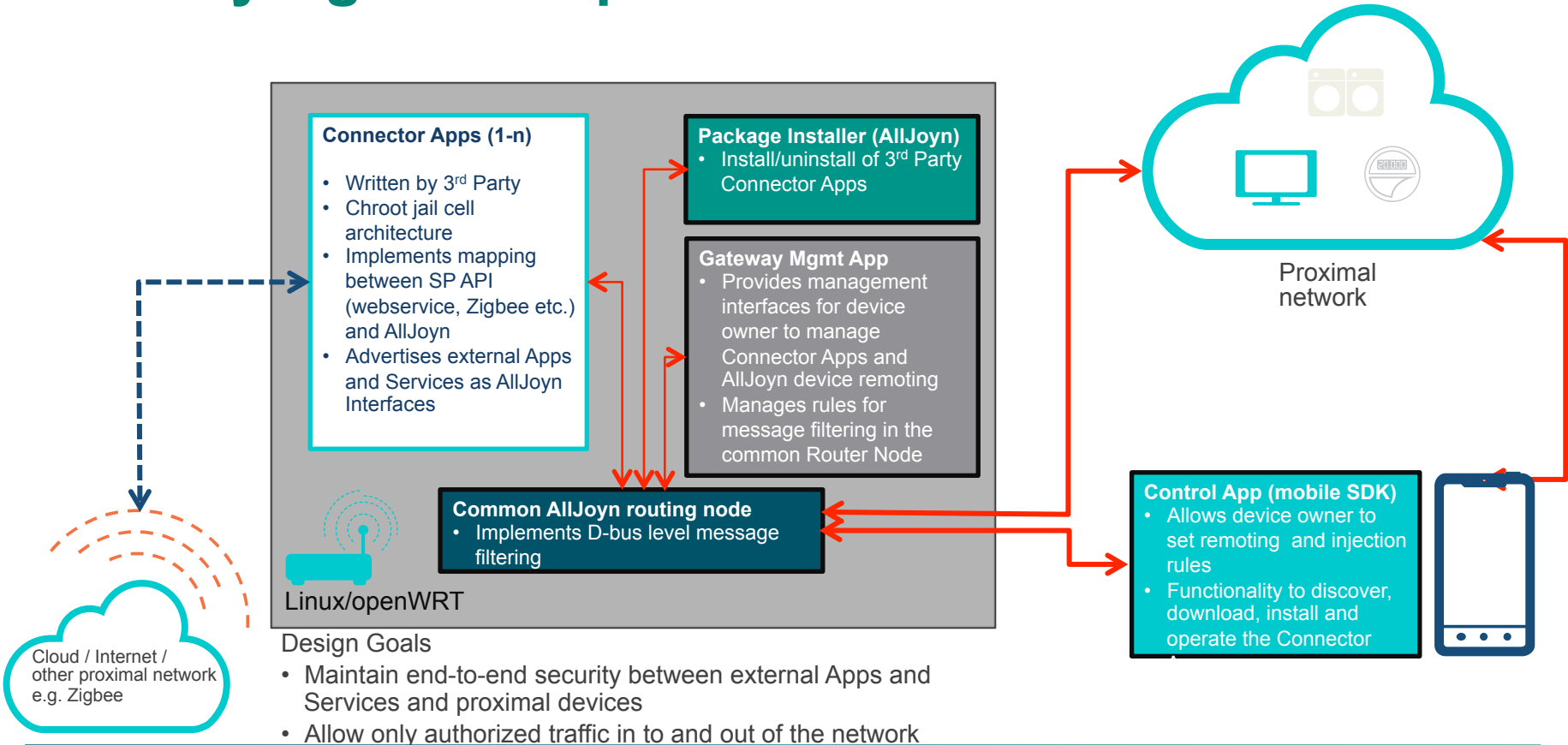


Open source building blocks for value added services

Use AllJoyn Core Library and Service Frameworks to create differentiated offerings



Gateway Agent 1.0: product architecture



AllSeen Alliance Summit

If you play a key part of the Internet of Things, you won't want to miss this exclusive and intimate event.

Space is limited so register quickly as we expect it to sell out.

allseenalliance.org/event

A promotional banner for the AllSeen Alliance Summit. The background is a dark blue collage of images related to technology and networking. At the top right, the AllSeen Alliance logo (a white geometric shape) is followed by the text "ALLSEEN ALLIANCE SUMMIT" in white. Below this, the main headline "YOU'LL WANT TO BE HERE REQUEST YOUR INVITE TODAY" is written in large, bold, white capital letters. Underneath the headline, the dates "NOVEMBER 10 - 12, 2014" and the location "HYATT SANTA CLARA · SANTA CLARA, CA" are listed in white capital letters.

**ALLSEEN
ALLIANCE
SUMMIT**

**YOU'LL WANT TO BE HERE
REQUEST YOUR INVITE TODAY**

NOVEMBER 10 - 12, 2014
HYATT SANTA CLARA · SANTA CLARA, CA

Join AllSeen Alliance members and fellow key participants of the IoT ecosystem and community at the first annual AllSeen Alliance Summit, an invitation-only event designed to provide a collaborative and educational space for the steering groups and work groups of the AllSeen Alliance.

The event will bring together the innovators, developers, and users enabling widespread adoption and accelerating the development and evolution of an interoperable peer connectivity and communications framework based on AllJoyn™ for devices and applications in the Internet of Everything.

The AllSeen Alliance Summit will feature both general and breakout sessions for each working group and many opportunities for networking and learning the latest developments in AllSeen. If you are a prospective member or a key part of the Internet of Things Ecosystem, you won't want to miss this exclusive and intimate event. Space is limited to enable collaboration so we encourage all members and interested parties to register quickly as we expect it to sell out.

REQUEST AN INVITATION

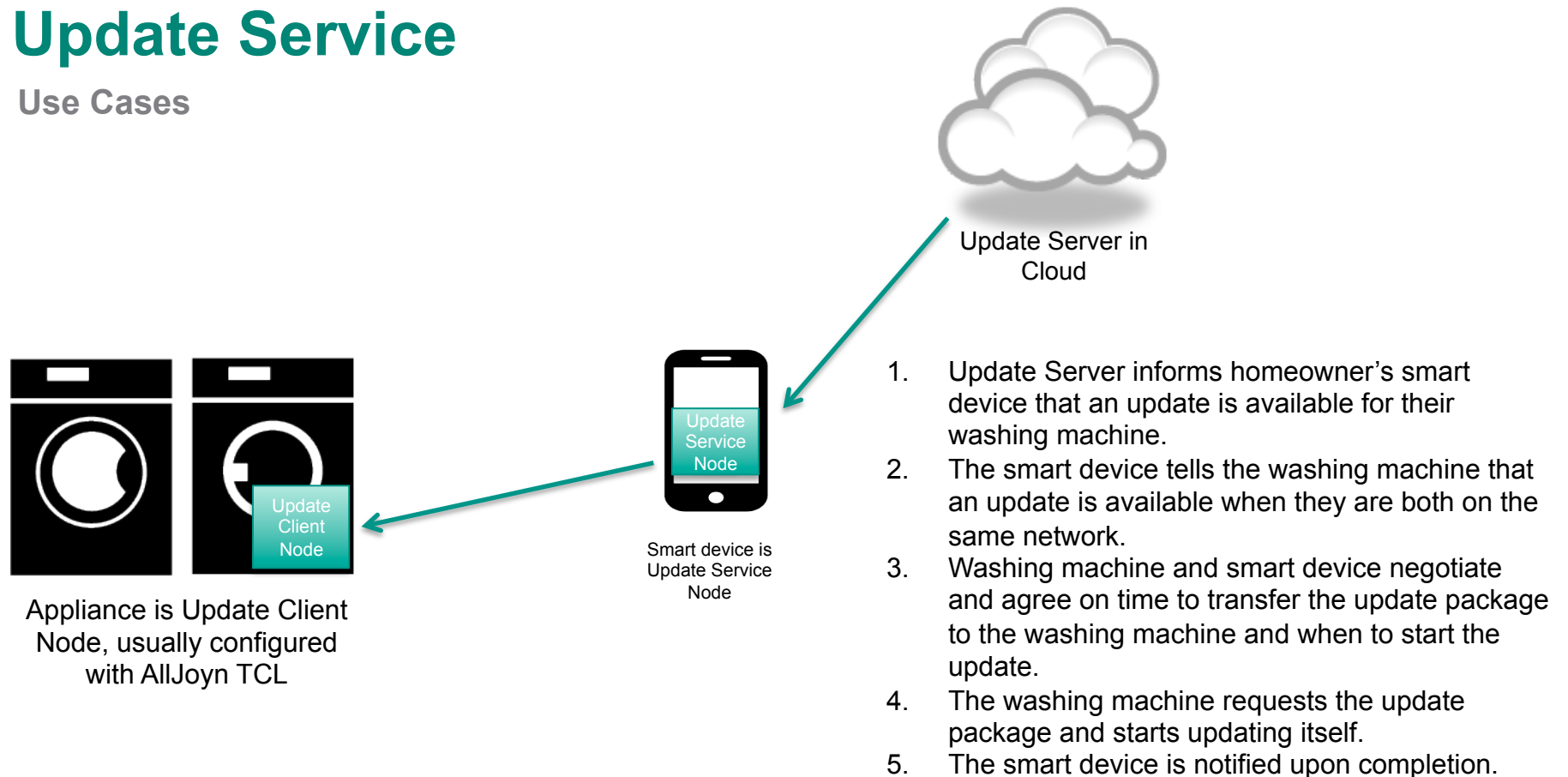


More information can be found on the website here:

<http://go.linuxfoundation.org/e/6342/events-allseen-alliance-summit/yg4lb/560900615>

Update Service

Use Cases



TSC and Working Groups

Composed of Premier Member Representatives, TSC Chair and Working Group Chairs

Art Lancaster (Affinegy)

Dominique Chanut
(Technicolor)

Hiroshi Yahata (Panasonic)

Jean-Francois (Jeff) Remy
(Technicolor)

Marc Alexander (LIFX)

Mathew Martineau (QCE)

Milton Wang (Haier)

Jun Zhuang (Haier)

Toru Ueda (Sharp)

Deayoung Kim (LGE)

Josh Hershberg (QCE)

Ryan Li (TP LINK)

Tolly Smith (Silicon Image)

Dino Natucci (Microsoft)

- Subcommittees

- Technical Documentation/Website

- Tools and Infrastructure

- Working Groups (<https://wiki.allseenalliance.org/>)

- **Base Services Working Group**

- Time Service

- Audio Service

- **Compliance and Certification Working Group**

- **Connected Lighting Working Group**

- **Core Working Group**

- Security 2.0

- Open WRT

- Extensions to type system & introspection
XML format

- Simplified API

- AllJoyn.js

- **Data-Driven API Working Group**

- **Developer Tools Working Group**

- **Gateway Agent Working Group**

- Software Update sub-Working Group

- **Smart Home Working Group**



Questions?

Joe Speed, Director IoT
jspeed@linuxfoundation.org
[@JoeSpeeds](https://twitter.com/JoeSpeeds) on twitter
linkedin.com/in/joespeed





**ALLSEEN
ALLIANCE**

Backup materials



New Working Groups and Projects

Active participation is driving new service frameworks

- **Connected Lighting Working Group** (LIFX) – target 14.06 release
- **Data-Driven API Working Group** (Technicolor) – target 14.06 and 14.12
- **Gateway Agent Working Group** (Affinegy) – target 14.12 release
 - **Software Update sub-Working Group** (Red Bend) -- target 14.12
- **Smart Home Service Working Group** (Haier) -- First release planned for October 2014
- **Security 2.0 project** (under Core) – Microsoft, Technicolor, Symantec, QCE
- **IoT Analytics & Telemetry** (Tellient) – target 14.12 release
- **Base Services Working Group** (QCE)
 - **Time Service** (QCE) – target 14.12 release
 - **Audio Service** (QCE) – target 14.12 release

New Working Group / Feature Proposals (https://wiki.allseenalliance.org/tsc/technical_steering_committee/proposals)

- **AllJoyn Language Bindings** (Fon in Sept)
 - decide best way to standardize the bindings in AllJoyn
- **Connected Home & Building; Living Scenarios** (Legrand in Sept) – based on 14.06
 - A living scenario can be seen as a signal/event sent through the “home network” that map the very basic behavior / desires of the dwellers
- **Media Delivery Framework** (QCE in Sept) – target 14.12 release

Why Build an Alliance?

- The Internet of Things is emerging
 - Things are getting smarter
 - Everything is getting connected
 - Wireless or wired, over a variety of protocols and bearers
- Still needed: A shared framework and common language for communication
 - Smart things need to be able to recognize, communicate, and interact with each other
 - Regardless of manufacturer, type of device, OS or embedded software, connectivity type, or compute resources available
- The Alliance's codebase will be built upon the AllJoyn Framework
 - Open source communication platform for the Internet of Things
 - Core System Services for any device/OS/HW/OEM
 - Onboarding, Notifications, Control, Configuration
 - Showcase applications speed development and customization
 - Creates new and exciting experiences with our environment and the things we use every day

Alliance Structure

501(c)(6) non-profit corporation



Alliance Member Expectations

Active participation contributes to a vibrant ecosystem

- Participate in Working Groups on the definition of new Service Frameworks
- Contribute and share new reference implementations and compliance tests of Service Frameworks
- Provide input/feedback on proposals for new Service Frameworks
- Propose use cases that help define product interface definitions
- Promote Alliance certified products via Alliance PR, member PR, events, member white papers, etc.

Alliance Board of Directors Expectations

Business Leadership: Governance, Marketing, Operations

- Premier Membership provides 1 board seat
- Attend monthly board meetings/calls
- Work towards the Alliance Marketing Plan/Objectives
- Promote Alliance and its ecosystem via Alliance PR, events, social media, thought leadership, industry outreach
- Encourage expanded use of Alliance certified products and services
- Oversee guidelines around use and marketing of Alliance Certified marks/logo
- Help protect the ecosystem and make strategic decisions to further the future direction of Service Frameworks
- Approve budgets and meeting minutes
- Modify Bylaws, as required

Technical Steering Committee Expectations

Senior Technical Leadership

- Premier Membership provides 1 TSC seat
- Attend weekly meetings/calls
- Guarantee an open decision making process on business and technical issues by senior technical decision makers
- Approve technical work groups around various Service Frameworks to guide expansion of existing services and/or creation of new services
- Solicit input from Industry Players
- Define requirements for contributing code (code style, documentation, test cases, use cases)
- Define programming languages that are acceptable for contributions and which set of language bindings are required
- Responsible for targeting simultaneous release dates from working groups
- Define release quality standards and enforce technical best practices
- Monitor technical progress of working groups
- Ensure working groups participate fully in releases (e.g. include test cases, documentation, etc)
- Mediate technical conflicts and organize inter-project collaboration

Marketing Committee Expectations

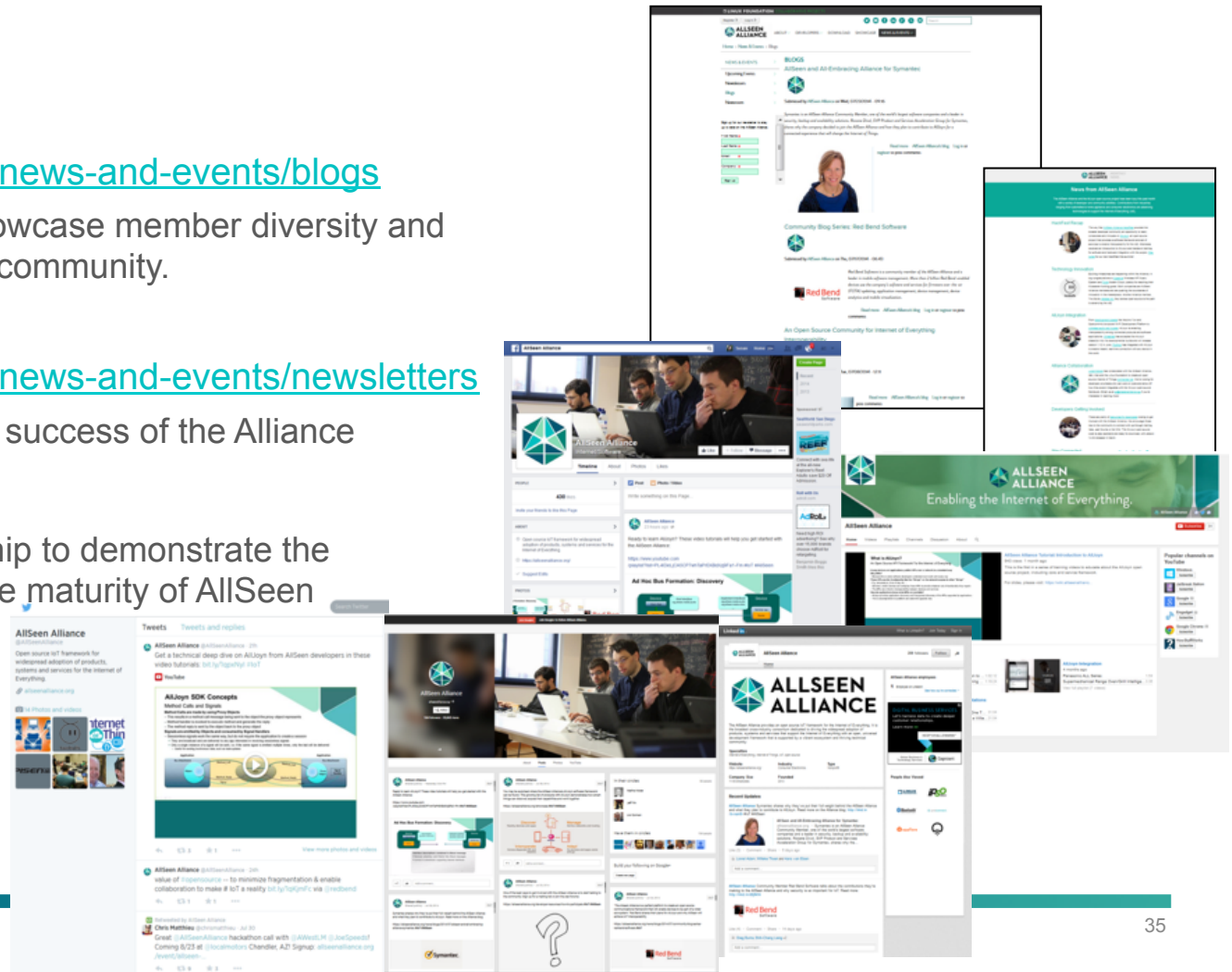
Drive Awareness, Educate, Engage

- Objective
 - Develop, plan, manage and execute strategic marketing plans and programs; own the marketing relationship with key Alliance members
- Strategies
 - Develop brand identity and messaging guidelines for Alliance certified products
 - Drive the development of a comprehensive annual Alliance marketing plan, calendar and budget
 - Drive positive awareness and thought leadership on behalf of the Alliance
 - Develop marketing assets/tools for use by membership (videos, visual library, marketing collateral)
 - Support ongoing recruitment of Alliance Members
 - Audit of Alliance Certified mark adherence

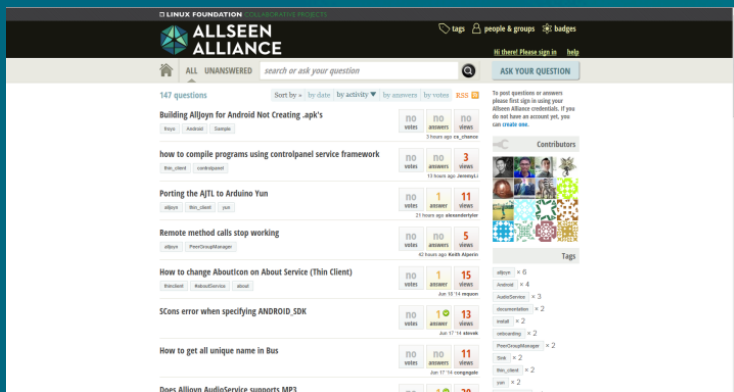
Marketing/PR

- AllSeen Alliance Blog
<https://allseenalliance.org/news-and-events/blogs>
 - blog from members to showcase member diversity and thought leadership in the community.
- Monthly newsletter
<https://allseenalliance.org/news-and-events/newsletters>
 - continue to showcase the success of the Alliance
- PR / Speakerships
 - to assert thought leadership to demonstrate the pervasiveness and relative maturity of AllSeen to alternative efforts.

- Social media



For More Information



Alliance Wiki -- <https://wiki.allseenalliance.org>

- Documents, downloads, and developer tools
- Source Code, release overviews, roadmaps
- Training & Service Framework details
- Working Groups, New Proposals & meeting minutes

Releases & Service Roadmaps -- <https://wiki.allseenalliance.org/release/overview>

Certification -- <https://allseenalliance.org/certification>

Forums -- <https://ask.allseenalliance.org/questions>

Public Mail Lists -- <https://lists.allseenalliance.org/mailman/listinfo>

Showcase -- <https://allseenalliance.org/showcase>

Monthly Newsletter --

<https://allseenalliance.org/news-and-events/newsletters>